Record Notes of Discussion during meeting of MICC of Technology Mission of Indian Railways (TMIR) held at Rail Bhawan, New Delhi on 08.03.2021

A meeting of MICC (Mission Implementation and Coordination Committee) of TMIR (Technology Mission of Indian Railways) was held at Committee Room, Rail Bhawan, New Delhi on 8th March, 2021. The agenda items were discussion on progress of projects under TMIR, proposed amendments in MMM and funding related issues.

The meeting was chaired by Prof. N.S. Vyas, IIT, Kanpur (Chairman/MICC) and Shri Virendra Kumar, DG/RDSO (Co-Chairman/MICC). Some MICC Members joined the meeting through Video Conferencing.

Members Present

1) Prof. N.S. Vyas, Chairman & Prof. IIT, Kanpur (Chairman)
2) Shri Virendra Kumar, Co-Chairman & DG/RDSO (Co-Chairman) – Through VC
3) Dr. Neeraj Sharma, Adviser, DST
4) Shri P.S. Gupta, Executive Director CE(G), Railway Board
5) Shri Manish Jain, Executive Director ME (Fr.)), Railway Board – Through VC
6) Shri Umesh Balonda, Executive Director (E&R), Railway Board
7) Shri S.K. Singh, ED(Research), RDSO – Through VC
8) Shri D.K. Jairaj, PED(Finance), RDSO – Through VC
9) Dr. Sunil Sherlekar- – Through VC

Other Attendees

1) Shri M.P. Poonia, Vice Chairman, AICTE – Through VC (Ministry of Education)
2) Shri Kuldeep Singh, Dir/E&R, Railway Board
3) Shri Chintalagiri Shashank, Proj. Executive Officer (Industry 4.0) / IIT-K

Leave of Absence Granted

1) Shri O.P. Tantia, MD/Besco

1. ED/ E&R welcomed all the participants. He informed that while MICC meeting was being held after almost six months, two review meetings on 'Pilot Project on Development and Implementation of Industry 4.0 Protocols for Rail-Coach Design & Manufacturing at Modern Coach Factory, Rae Bareli' had been held in February and March 2021. He expressed that the joint cooperation of the three Ministries of Railways, Science & Technology and Education through TMIR would be a big step in the direction of AatmaNirbhar Bharat.
2. Shri Kuldeep Singh, DER/Railway Board, gave a presentation on the agenda items.
3. The decisions taken in the last MICC meeting on 11th August, 2020 were read out and it was informed that sanction letters for the three projects discussed in that meeting have been issued by Chairman/MICC on 18.11.2020 viz.:

   (i) Development of Model and Design Methodology for Railway Formation and Validation using Full Scale Model Study

   (ii) Development of Methodology and Specifications for Utilization of Steel Slag as Ballast Material in Railway Track

(iii) Development of IMW with complete DAQ & Tailor made software to analyse the FEM results to locate critical locations on wheel for instrumentation.

4. Prof. N.S. Vyas mentioned that the project "Development of IMW with complete DAQ & Tailor made software to analyse the FEM results to locate critical locations on wheel for instrumentation" for which sanction letter has already been issued on 18.11.2020 was proposed to be dropped from TMIR as after detailed discussions with Co-Chairman and RDSO officers, as it was felt that the project was mostly Developmental in nature with little Research content. Hence, it was decided that the Project would be dropped from TMIR.

5. It was informed that 'Pilot Project on Development and Implementation of Industry 4.0 Protocols for Rail-Coach Design & Manufacturing at Modern Coach Factory, Rae Bareli' was making good progress and monthly review meetings were being held to sort out issues and speed up the project. An issue was raised regarding the non-availability of Sanction Letter for this project and it was informed by Prof. N.S. Vyas that the necessary papers were available with DST and they would provide it to Railways.

6. **Amendments in MMM** – Some proposed amendments to MMM were discussed. The changes agreed to by MICC are as under :

Para	Existing Provision	Amended Provsion
VI	**FUNDING COMPONENTS** • Ministry of Railways 30% Rs. 90 Cr • Ministry of Human Resource Development 25% Rs. 75 Cr • Department of Science & Technology 25% Rs. 75 Cr • Industry 20% Rs. 60 Cr	**FUNDING COMPONENTS** • Ministry of Railways 30% Rs. 90 Cr • Ministry of Education 25% Rs. 75 Cr • Department of Science & Technology 25% Rs. 75 Cr • Industry 20% Rs. 60 Cr **Note:** A project can be wholly or partially funded by a Ministry(s) or Industry(s) within their overall share.
XIII. 5	**PROCEDURE FOR RELEASE OF GRANT FOR RESEARCH PROJECT** 5. Funds obtained from funding agencies will be deposited with the Deposit Account created by RDSO Master Account, as described in Para-XVI below and duly acknowledged.	**PROCEDURE FOR RELEASE OF GRANT FOR RESEARCH PROJECT** 5. Funds obtained from funding agencies will be deposited, as described in Para-XVI below and duly acknowledged.
XIII. 8	On completion of project(s) and/or Mission, additional grants, if required, shall be released by the funding agencies, as laid down in Para VI above.	8. On completion of project(s) and/or Mission, additional grants, if required, shall be released by the funding agencies, as laid down in Para VI above. Also, if there is saving, the

	Also, if there is saving, the same shall be surrendered with the funding agencies in the same proportion as the funds were provided. Funding of each project has been planned in the ratio of 30:25:25:20 by the Ministry of Railways, MHRD, MoST and Industry respectively. However, in case, in a particular project, no industry partner is associated; the funding on this account will be shared equally by MHRD, MoST and Ministry of Railways. In such eventuality, for the particular project, this ratio of funding will also be applicable for various purposes, such as surrender of savings, sharing of IPR, revenues etc.	same shall be surrendered with the funding agencies in the same proportion as the funds were provided. Funding of each project has been planned in the ratio of 30:25:25:20 by Ministry of Railways, MoE, MoST and Industry respectively. However, in case, in a particular project, no industry partner is associated; the funding on this account will be shared equally by MoE, MoST and Ministry of Railways. In such eventuality, for the particular project, this ratio of funding will also be applicable for various purposes, such as surrender of savings, sharing of IPR, revenues etc. However as per requirement, project(s) can be wholly or partially funded by a Ministry(s) or Industry(s) within their overall share.
XVI .1	**FINANCIAL MANAGEMENT** 1. Fund will be received in a Master Bank Account, as decided by the MICC of TMIR.	**FINANCIAL MANAGEMENT** Fund will be received in the Bank Account of TMIR maintained by RDSO or MICC may decide on case to case basis to receive the contributions of Ministry(s)/ Industry(s), in the Project Account(s) (refer Para XIII.6 of MMM) at the Institute(s) of the Principal Investigator(s)

7. **Amendments in MOU:** Following proposed amendments in MOU were agreed to by MICC:

7.1. Addendum in **Para 3.2 (iii), Facilitating the Co-financing of Projects** of MOU as *"However as per requirement, project(s) can be wholly funded by any of the Ministry or Industry within their overall share"*

7.2. **Para 3.5 (v)** of MOU to be amended as *"However as per requirement, project(s) can be wholly or partially funded by a Ministry(s) or Industry(s) within their overall share. Fund will be received in the Bank Account of TMIR maintained by RDSO or MICC may decide on case to case basis to receive the contributions of Ministry(s)/ Industry (s), in the Project Account(s) (refer Para XIII.6 of MMM) at the Institute(s) of the Principal Investigator(s)"*

8. Shri Kuldeep Singh also raised a point regarding a decision taken in MICC meeting held on 22.05.2018 (Para 1.2) which said:

> "Shortlisted projects from RDSO will be forwarded to E&R Directorate/Railway Board after the approval of DG/RDSO for comments and technical scrutiny of the concerned Directorate of the Railway Board."

ED/ E&R put forth that since MICC was minutely deliberating on the merits and technical aspects of every proposed project, there was no necessity of sending it to the Railway Board for scrutiny again, as the process would delay projects. Hence it was agreed that Para 1.2 of the said Minutes would stand overruled.

9. The issue of Board's sanction for individual TMIR projects costing over Rs 2.5 Cr as referred by Research Directorate/ RDSO in a letter, was also discussed in the meeting. It was agreed that as TMIR is an already sanctioned Pink Book work in Railway Budget 2015-16, TMIR projects only required approval at the level of MICC under the guidelines of MMM & MoU and no separate sanction of Board is required.

10. Dr. M.P. Poonia, Vice Chairman /AICTE, stressed on the importance of Artificial Intelligence-based solutions. He also requested that the possibility of engaging students and teachers from AICTE may be explored to give them better exposure and also employment opportunities.

11. Shri P.S. Gupta, EDCEG /Railway Board suggested that a project may be taken up by Track Directorate of RDSO, on detection of fractures using AI and data analytics on the already available data with Railways.

12. Shri Virendra Kumar, DG /RDSO & Co-Chairman/MICC thanked all participants and hoped that with the amendments to MMM and resolution of pending issues, the projects would gather momentum.

13. ED /E&R ended the meeting with a Vote of Thanks.

16.03.2021

(Umesh Balonda)
Executive Director/E&R
Railway Board

No. 2019/E&R/7(17)/1 Pt. dated 15.03.2021

Copy to:

(i) Prof. N.S. Vyas, IIT/Kanpur & Chairman/MICC of TMIR
(ii) Director General, RDSO & Chairman/MICC of TMIR
(iii) Members of MICC of TMIR